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ROYAL ENTOMOLOGICAL SOCIETY
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GENERAL MEETING

WEDNESDAY, 5TH JUNE, 1946, at 5.30 p.m.

AGENDA

1. Confirmation of the Proceedings of the General Meeting held on 1st May, 1946.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Additions to the Library :

Presented.

British Museum (Natural History) : *Economic Series No. 11. Furniture Beetles—their life history and how to check or prevent the damage caused by the worm.* By C. J. Gahan. Fourth edition, revised and enlarged by F. Laing. 8vo. London, 1946.

British Museum (Natural History) : *Economic Series No. 12. The Cockroach : its life history and how to deal with it.* Fourth edition. By F. Laing. 8vo. London, 1946.

Purchased.

Bonnet, P. : *Bibliographia Araneorum. Analyse méthodique de toute la littérature aranéologique jusqu'au 1939.* Tome 1. 8vo. Toulouse, 1945.

In addition, separates have been presented by Mr. H. K. Munro, Dr. J. T. Salmon, and Dr. A. D. Imms, F.R.S.

5. Admission of Fellows.
6. Papers accepted for publication in the *Transactions*.
7. Communications.

(1) Dr. W. H. Thorpe.

Plastron Respiration : A Chapter in the Natural History of Aquatic Insects.

[Abstract.]

It is common knowledge that the air stores which most adult aquatic insects carry with them in the form of films or bubbles or in special sub-elytral spaces must, at least during the active season, be renewed by frequent visits to the surface. Ege (1915) in a well known paper showed that some of the bubble

and film-carrying insects (e.g. DYTISCIDAE, HYDROPHILIDAE, CORIXIDAE, NOTONECTIDAE) can, if the water is well aerated, obtain a proportion of their total oxygen requirement from it by using the exposed surfaces of their bubbles as if they were gills. This method, for reasons which will be discussed, is in most insects of very limited utility; for the insect if it stays below for a long period is in danger, even in well aerated water, of losing its bubble altogether and so getting waterlogged. Nevertheless there are three groups of insects which have independently evolved a special technique of "plastron respiration" which renders them virtually independent of direct contact with the atmospheric air. They are: the genus *Aphelocheirus* [Hemiptera, APHELOCHEIRIDAE (NAUCORIDAE)]; the genus *Haemonia* (Macrolea) [Coleoptera, CHRYSOMELIDAE, DONACIINAE] and the coleopterous family ELMIDAE. These insects by a series of beautiful adaptations have overcome all the difficulties and succeed in holding an extremely thin film of air, "the plastron", so securely that it cannot be lost under any conditions they are likely to meet. This plastron acts solely as a gill and is of no value as an air store. The subject will be discussed with special reference to *Aphelocheirus*.

(2) **Professor G. D. Hale Carpenter (President).**

The African Nymphalines *Charaxes etesipe* Godart and *Charaxes penricei*
Rothschild & Jordon

[Abstract.]

Charaxes cacuthis Hewitson, of Madagascar, has been considered to be a representative of the widespread *Ch. etesipe*. It differs markedly from the form *paradoxa* Lathy of the Comoro Isles, which undoubtedly is derived from *etesipe*. Reasons will be given for the belief that *cacuthis* has been derived from *penricei*, which occurs with *etesipe* in Angola and Nyasaland. The difference between the forms on Madagascar and the Comoro Isles raises interesting questions.

(3) **Mr. J. Leclercq.**

Some effects of atmospheric humidity on two NYMPHALIDAE: *Aglais urticae* L. and *Araschnia levana* L.

[Abstract.]

Pupae of both species are able to produce butterflies under all conditions of relative humidity. However, butterflies obtained in saturated air cannot expand their wings completely, and, on the other hand, some *A. urticae* bred in very dry conditions die before escaping completely from their pupae.

The coloration of *Araschnia levana* (generation *prorsa*) is affected by humidity; breeding in moist air gives dark specimens belonging to the aberration *obscura* Frühstorfer; breeding in extremely dry conditions gives brighter forms of the aberration *intermedia* Stichel or forms closely resembling it. In intermediate humidities quite normal *prorsa* L. are obtained.

(4) Communications and exhibits the titles of which have been received since the circulation of this agenda.

Fellows are particularly requested to bring suitable exhibits to the General Meetings even though it may not be possible to announce their intention to do so before the meeting.

Tea will be served in the Library before the meeting.

NOTICES.

Fellows are reminded that papers for which they are anxious to secure early publication can now be published with very little delay in *Proceedings*, provided they do not exceed a length of some eight printed pages.

The attention of Fellows is drawn to the establishment of a small scientific library at the Institut Français, Queensberry Place, South Kensington, S.W. 7, under the auspices of the Cultural Relations Department of the French Foreign Office and the Centre National de la Recherche Scientifique. The Library comprises a number of current scientific periodicals and a few recent French scientific books. The facilities offered are as follows :—

(a) Consultation of books in the library.

(b) Borrowing by post.

(c) Arrangements are being made to obtain from France, as far as possible, any books or periodicals desired which may not be available in the Library.

Fellows wishing to take advantage of the facilities offered should write direct to the Librarian at the address given above, asking to be enrolled on his register. A catalogue of the books and periodicals available would then be supplied.

PROCEEDINGS OF THE GENERAL MEETING HELD ON 1ST MAY, 1946.

Professor G. D. Hale Carpenter, M.B.E., D.M., President, in the Chair.

Present, 58 Fellows and 10 Visitors.

The minutes of the meeting held on 3rd April were confirmed and signed by the President.

The names of the following candidates for election were read : For the first time : J. L. C. Banks, R. M. Handfield-Jones, M.C., M.S., F.R.C.S., H. G. Khalsa, M.Sc., Francis J. Griffin, A.L.A., Lt.-Col. W. G. B. Hawley, D.S.O., W. H. R. Lumsden, B.Sc., M.B., Ch.B., E. T. Nielsen, Dr.Phil., S. Pradhan, D.Sc., and F. C. Reeve.

For the second time : E. H. Gills and B. P. Moore.

The Secretary announced that the following had been elected Fellows of the Society : S. Banerjee, Rothamsted Experimental Station, Harpenden,

Herts; E. M. Elmhirst, M.B., B.S., 28, Hogarth Road, Earls Court, London, S.W.5; J. Hlisnikowski, Sokolski 5, Moravska Ostrava, Czechoslovakia; Lt. B. M. Jones, R.N.V.R., Bryn Clyd, Warren Road, Deganwy, Llandudno, North Wales; B. Stuart, Penmillard, Hayes Lane, Beckenham, Kent; A. K. Wafa, Rothamsted Experimental Station, Harpenden, Herts.

Thanks were voted to donors of gifts to the Library since the last meeting.

Mr. S. N. Banerjee, Mr. K. E. P. Braid, Mr. G. F. Burnett, Mr. P. W. E. Currie, Major J. N. Eliot, Mr. R. G. Fennah, Miss M. G. Hocken, Major C. T. Lloyd, Mr. A. M. Morley and Mr. A. K. Wafa signed the Obligation Book and were admitted Fellows.

The President referred to the fact that as the Registrar, Mr. Griffin, was leaving the Society at the end of May, this was the last meeting he would attend in his official capacity; he expressed the hope that the Society might have the opportunity of seeing Mr. Griffin often at its meetings.

Communications were made by Dr. C. B. Williams, Dr. O. W. Richards and Mr. R. G. Fennah, abstracts of which appeared on page 16. A fuller account of the observations by Dr. O. W. Richards and Mr. R. G. Fennah will appear in *Proceedings Series A*.

In the discussion which followed Mr. Fennah's remarks Mr. H. E. Box drew attention to the work of Harland and Atteck (1933, *Z. indukt. Abstamm. u. VererbLehre*, 64 : 54-76) on races of the egg-parasite *Trichogramma minutum* (Riley), the behaviour of which to the same host varied with their origin in the various islands of the West Indies. Mr. Fennah had produced evidence for the development of very restricted endemism among numerous insects with the phytophagous habit and it was interesting to find confirmation among entomophagous species. Mr. Fennah then supplemented his remarks with brief observations on the behaviour of the Chalcidoids *Tetrastichus marylandensis* Gir. and *Ufens* sp. in some of the West Indian islands.

In addition, Mr. A. M. Morley exhibited the following insects taken at Folkestone in 1945: (a) A ♂ *Colias hyale* of the third brood (1.x.45) with the underside tinged with green; (b) an unusually large ♂ *Colias croceus* also of the third brood (4.x.45); (c) a ♂ *Lysandra coridon* ab. *pulla*; (d) a ♂ *L. coridon* with the features of ab. *pulla* ab. *ultranubila* and ab. *fumidescens*; (e) a ♂ *L. coridon* ab. *viridescens*; (f) a specimen doubtfully referred to *Procus versicolor*; and (g) a parasite bred from *Nonagria sparganii* taken in Romney Marsh.

N. D. RILEY, *Hon. Secretary*.

ADMISSION OF FELLOWS.

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-Laws and attends the meeting on 5th June, 1946, is requested to inform the Society before 5.15 p.m. on that date.

The next Meeting will be held on Wednesday, 2nd October, 1946, at 5.30 p.m.